[CMSC 425/525] In-Class Exercise: Input-Space Partitioning

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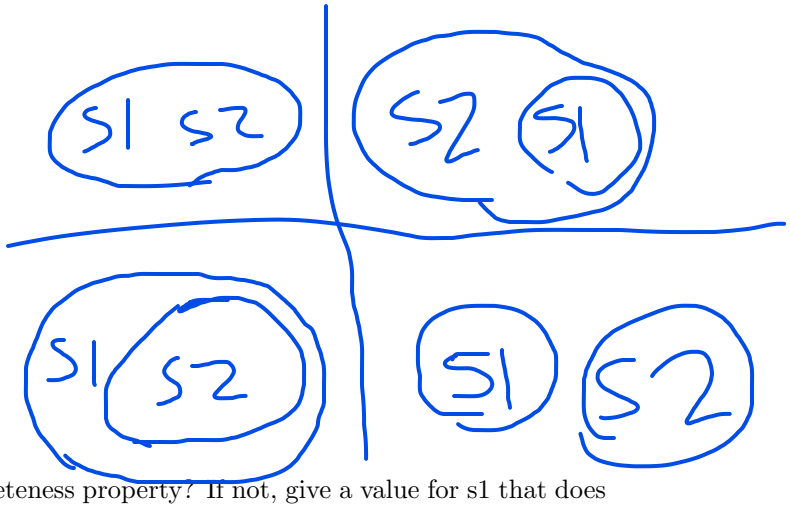
Consider the method intersection() below, along with two characteristics:

```
public static Set intersection (Set s1, Set s2)
/**
 * @param  s1, s2 : sets to compute intersection of
 * @return a (non null) Set equal to the intersection of Sets s1 and s2
 * @throws NullPointerException if s1 or s2 is null
*/

Characteristic: Type of s1
- s1 = null
- s1 = {} empty set
- s1 has at least one element

Characteristic: Relation between s1 and s2
- s1 and s2 represent the same set
- s1 is a subset of s2
- s2 is a subset of s1
- s1 and s2 do not have any elements in common
```



- Does the partition "Type of s1" satisfy the completeness property? If not, give a value for s1 that does not fit in any block. Yes, because none of the blocks overlap and they cover all types possible
- Does the partition "Type of s1" satisfy the disjointness property? If not, give a value for s1 that fits in more than one block. No, because none of the blocks overlap
- If necessary, fix "Type of s1".
- Does the partition "Relation between s1 and s2" satisfy the completeness property? If not, give a pair of values for s1 and s2 that does not fit in any block. Yes, because none of the blocks overlap and they cover all types possible
- Does the partition "Relation between s1 and s2" satisfy the disjointness property? If not, give a pair of values for s1 and s2 that fits in more than one block. No, because none of the blocks overlap
- If necessary, fix "Relation between s1 and s2".